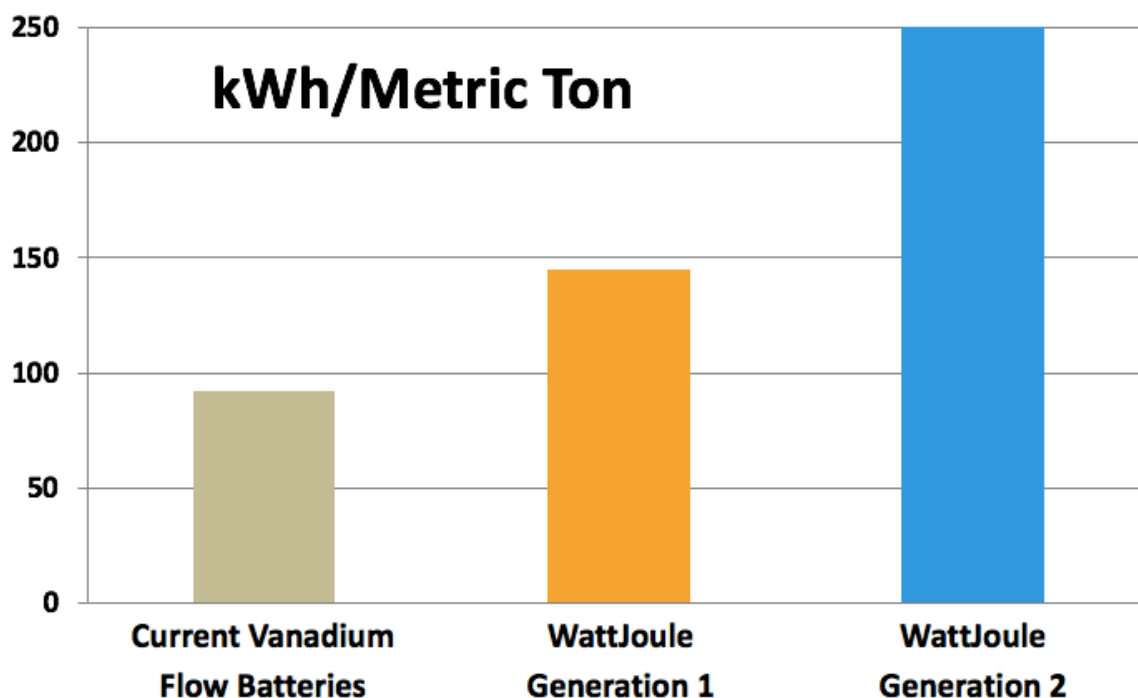




## WattJoule Achieves Breakthrough Vanadium Cost Reduction for Flow Batteries

Devens, MA - July 11, 2019 - WattJoule Corporation, a developer of next-generation vanadium redox flow battery energy storage systems, has announced this week, record-breaking vanadium cost reduction for flow batteries. WattJoule's highly scalable ElectriStor™ energy storage platform enables the widespread deployment of solar and wind energy, microgrids, smart grid capabilities and grid reliability improvements.

One of the major barriers preventing the widespread adoption of large-scale energy storage has been cost. WattJoule has developed ElectriStor™, an energy storage platform based on a flow battery, where electricity is stored in a water-based electrolyte containing vanadium salts. Commercialization of vanadium flow battery systems today suffers from the high cost of vanadium. WattJoule's new technology directly addresses the cost issue by significantly increasing the energy stored for a given amount of vanadium. The magnitude of this increased vanadium utilization can best be illustrated in the graph below:



"As you can see from the illustration above, we have developed significant improvements in our ability to store more kilowatt hours of energy, per metric ton of vanadium pentoxide, commonly used as a starting material in vanadium flow batteries on the market today," said Greg Cipriano, VP Business Development and Co-Founder of WattJoule. "Our systems simply use significantly less vanadium to store the same amount of energy. This translates to a substantial cost savings for those system integrators that use our ElectriStor™ platform."

"Several factors have contributed to the improved vanadium utilization for WattJoule's redox flow battery. For the Generation 1 product these include the development of improved vanadium electrolytes, and cell and stack designs," said Dr. H. Frank Gibbard, CEO and Co-Founder of WattJoule. "Our Generation 2 systems benefit from the removal of nearly half of the vanadium content through substitution of an alternative positive active material."

The WattJoule ElectriStor™ Gen 1 platform is currently being evaluated and integrated into energy storage systems by multiple strategic customers. ElectriStor™ platform licensing is available today. Working with our strategic partners and supply chain, WattJoule can provide electrolyte and core components in volume in Q4 2019 to licensees. The further improved Gen 2 platform upgrade will be available in Q3 2021.

## **About WattJoule**

WattJoule has developed a next-generation electrical energy storage system that uses a safe water-based liquid. The company has developed a unique intellectual property portfolio that solves the historical cost problem that has slowed the commercialization of vanadium flow batteries. WattJoule's highly scalable ElectriStor™ energy storage platform enables the widespread deployment of solar and wind energy, microgrids, smart grid capabilities and grid reliability improvements. ElectriStor™ directly lowers customer electricity costs through multiple value streams. More information is available at [www.wattjoule.com](http://www.wattjoule.com).

### **Media Contact:**

Greg Cipriano  
[greg@wattjoule.com](mailto:greg@wattjoule.com)  
508-942-8995